

```
BBBBBBBBBBBBBB      AAAAAAAAAA      SSSSSSSSSSSSSS      RRRRRRRRRRRR      TTTTTTTTTTTTTTTT      LLL
BBBBBBBBBBBBBB      AAAAAAAAAA      SSSSSSSSSSSSSS      RRRRRRRRRRRR      TTTTTTTTTTTTTTTT      LLL
BBBBBBBBBBBBBB      AAAAAAAAAA      SSSSSSSSSSSSSS      RRRRRRRRRRRR      TTTTTTTTTTTTTTTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAAAAAAAAAAAAAAAAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAAAAAAAAAAAAAAAAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAAAAAAAAAAAAAAAAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBB      BBB      AAA      AAA      SSS      SSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSSSSSSSSSSSSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSSSSSSSSSSSSS      RRR      RRR      TTT      TTT      LLL
BBBBBBBBBBBBBB      AAA      AAA      SSSSSSSSSSSSSS      RRR      RRR      TTT      TTT      LLL
LLLLLLLLLLLLLLLLLLLL
```

```
BBBBBBBBB      AAAAAA      SSSSSSSS      CCCCCCCC      VV      VV      TTTTTTTTTT      RRRRRRRR      PPPPPPPP
BBBBBBBBB      AAAAAA      SSSSSSSS      CCCCCCCC      VV      VV      TTTTTTTTTT      RRRRRRRR      PPPPPPPP
BB          BB  AA          AA  SS          CC          VV      VV      TT          RR          PP          PP
BB          BB  AA          AA  SS          CC          VV      VV      TT          RR          PP          PP
BB          BB  AA          AA  SS          CC          VV      VV      TT          RR          PP          PP
BBBBBBBBB      AA          AA  SSSSSS      CC          VV      VV      TT          RRRRRRRR      PPPPPPPP
BBBBBBBBB      AA          AA  SSSSSS      CC          VV      VV      TT          RRRRRRRR      PPPPPPPP
BB          BB  AAAAAAAAAA      SS          CC          VV      VV      TT          RR      RR      PP
BB          BB  AAAAAAAAAA      SS          CC          VV      VV      TT          RR      RR      PP
BB          BB  AA          AA  SS          CC          VV      VV      TT          RR      RR      PP
BB          BB  AA          AA  SS          CC          VV      VV      TT          RR      RR      PP
BBBBBBBBB      AA          AA  SSSSSSSS      CCCCCCCC      VV      VV      TT          RR          PP
BBBBBBBBB      AA          AA  SSSSSSSS      CCCCCCCC      VV      VV      TT          RR          PP
```

```
....
....
....
....
```

```
LL          IIIIII      SSSSSSSS
LL          IIIIII      SSSSSSSS
LL          II          SS
LL          II          SS
LL          II          SS
LL          II          SS
LL          II          SSSSSS
LL          II          SSSSSS
LL          II          SS
LL          II          SS
LL          II          SS
LLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLL      IIIIII      SSSSSSSS
```

```
0001 0 %TITLE 'BAS$CVTRP - Convert real to packed'
0002 0 MODULE BAS$CVTRP (
0003 0 IDENT = '1-004'
0004 0 ) =
0005 1 BEGIN
0006 1
0007 1 *****
0008 1 *
0009 1 * COPYRIGHT (c) 1976, 1980, 1982, 1984 BY
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0024 1 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0025 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0026 1 *
0027 1 *****
0028 1
0029 1
0030 1
0031 1 ++
0032 1 FACILITY: Basic Language Support
0033 1
0034 1 ABSTRACT:
0035 1
0036 1 This module contains routines to convert real data types to packed decimal.
0037 1 It also contains routines to convert from packed to a real type.
0038 1
0039 1 These jacket routines are necessary because the OTS routines are JSB routines
0040 1 and use R9 to pass a parameter. If an error occurs R9 will not automatically
0041 1 be restored and the Basic compiler expects R9 to point at some local storage.
0042 1 Note that CALL entry points cause R9 to be saved in the frame.
0043 1
0044 1 ENVIRONMENT: Runs at any access mode - ASI reentrant
0045 1
0046 1 AUTHOR: Pamela L. Levesque, CREATION DATE: 15-April-1982
0047 1
0048 1 MODIFIED BY:
0049 1
0050 1 1-001 - Original. PLL 15-Apr-1982
0051 1 1-002 - Clean up some comments. PLL 21-Apr-1982
0052 1 1-003 - Add entry points for rounding. PLL 7-Jun-1982
0053 1 1-004 - Before reporting decimal overflow error, must check BASIC frame to
0054 1 ensure that "/OVERFLOW=NODEC" was not specified during the compile.
0055 1 DG 7-Mar-1984
0056 1
0057 1
```



```
59 0058 1 %SBTTL 'Declarations'
60 0059 1
61 0060 1 SWITCHES:
62 0061 1
63 0062 1
64 0063 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
65 0064 1
66 0065 1
67 0066 1 LINKAGES:
68 0067 1
69 0068 1
70 0069 1 LINKAGE
71 0070 1 JSB_CVT = JSB (REGISTER = 6, REGISTER = 7, REGISTER = 8, REGISTER = 9)
72 0071 1 : PRESERVE (2, 3, 4, 5, 10, 11);
73 0072 1
74 0073 1 TABLE OF CONTENTS:
75 0074 1
76 0075 1
77 0076 1 FORWARD ROUTINE
78 0077 1
79 0078 1 BASSCVTFP : NOVALUE, ! convert float to packed
80 0079 1 BASSCVTDP : NOVALUE, ! convert double to packed
81 0080 1 BASSCVTGP : NOVALUE, ! convert gfloat to packed
82 0081 1 BASSCVTHP : NOVALUE, ! convert hfloat to packed
83 0082 1 BASSCVTRFP : NOVALUE, ! convert float to packed (rounded)
84 0083 1 BASSCVTRDP : NOVALUE, ! convert double to packed (rounded)
85 0084 1 BASSCVTRGP : NOVALUE, ! convert gfloat to packed (rounded)
86 0085 1 BASSCVTRHP : NOVALUE, ! convert hfloat to packed (rounded)
87 0086 1 BASSCVTPF : NOVALUE, ! convert packed to float
88 0087 1 BASSCVTPD : NOVALUE, ! convert packed to double
89 0088 1 BASSCVTPG : NOVALUE, ! convert packed to gfloat
90 0089 1 BASSCVTPH : NOVALUE, ! convert packed to hfloat
91 0090 1
92 0091 1
93 0092 1 INCLUDE FILES:
94 0093 1
95 0094 1
96 0095 1 LIBRARY 'RTLSTARLE'; ! System symbols, typically from SYS$LIBRARY:STARLET.L32
97 0096 1
98 0097 1 REQUIRE 'RTLIN:RTLPSECT'; ! Define PSECT declarations macros
99 0192 1 REQUIRE 'RTLIN:BASFRAME.REQ'; ! BSF symbols
100 0395 1
101 0396 1
102 0397 1 MACROS:
103 0398 1
104 0399 1
105 0400 1 MACRO
106 M 0401 1 FIND_FRAME (F) =
107 M 0402 1 BEGIN
108 M 0403 1
109 M 0404 1 BUILTIN FP; ! Frame pointer
110 M 0405 1
111 M 0406 1
112 M 0407 1 F = .FP;
113 M 0408 1 DO
114 M 0409 1 BEGIN ! search back for Basic frame
115 M 0410 1 F = .F [BSF$A_SAVED_FP];
```

```
: 116 M 0411 1          END
: 117 M 0412 1          UNTIL (.F [BSF$A_HANDLER] EQLA BASSHANDLER OR
: 118 M 0413 1          .F EQC 0);
: 119 M 0414 1
: 120 M 0415 1          END;
: 121 M 0416 1 x:
: 122 M 0417 1
: 123 M 0418 1          EQUATED SYMBOLS:
: 124 M 0419 1
: 125 M 0420 1          NONE
: 126 M 0421 1
: 127 M 0422 1          FIELDS:
: 128 M 0423 1
: 129 M 0424 1          NONE
: 130 M 0425 1
: 131 M 0426 1          PSECTS:
: 132 M 0427 1
: 133 M 0428 1          DECLARE_PSECTS (BAS);          ! Declare PSECTs for BASS$ facility
: 134 M 0429 1
: 135 M 0430 1          OWN STORAGE:
: 136 M 0431 1
: 137 M 0432 1          NONE
: 138 M 0433 1
: 139 M 0434 1          EXTERNAL REFERENCES:
: 140 M 0435 1
: 141 M 0436 1
: 142 M 0437 1          EXTERNAL ROUTINE
: 143 M 0438 1
: 144 M 0439 1          BASSHANDLER,
: 145 M 0440 1          OTSSCVTFP_R9 : JSB_CVT,          ! OTS conv float to packed
: 146 M 0441 1          OTSSCVTDP_R9 : JSB_CVT,          ! OTS conv dbl to packed
: 147 M 0442 1          OTSSCVTGP_R9 : JSB_CVT,          ! OTS conv gfloat to packed
: 148 M 0443 1          OTSSCVTHP_R9 : JSB_CVT,          ! OTS conv hfloat to packed
: 149 M 0444 1          OTSSCVTRFP_R9 : JSB_CVT,          ! OTS conv float to packed (rounded)
: 150 M 0445 1          OTSSCVTRDP_R9 : JSB_CVT,          ! OTS conv dbl to packed (rounded)
: 151 M 0446 1          OTSSCVTRGP_R9 : JSB_CVT,          ! OTS conv gfloat to packed (rounded)
: 152 M 0447 1          OTSSCVTRHP_R9 : JSB_CVT,          ! OTS conv hfloat to packed (rounded)
: 153 M 0448 1          OTSSCVTPF_R9 : JSB_CVT,          ! OTS conv packed to float
: 154 M 0449 1          OTSSCVTPD_R9 : JSB_CVT,          ! OTS conv packed to dbl
: 155 M 0450 1          OTSSCVTPG_R9 : JSB_CVT,          ! OTS conv packed to gfloat
: 156 M 0451 1          OTSSCVTPH_R9 : JSB_CVT,          ! OTS conv packed to hfloat
: 157 M 0452 1          BASS$SIGNAL : NOVALUE;          ! signal non-fatal error
: 158 M 0453 1
: 159 M 0454 1          EXTERNAL LITERAL          ! Condition value symbols
: 160 M 0455 1          BASS$K_DECERR : UNSIGNED (8);          ! decimal error or overflow
```



```
162 0456 1 XSBTTL 'BASSCVTFP - Convert float to packed'
163 0457 1 GLOBAL ROUTINE BASSCVTFP (
164 0458 1     DEST,
165 0459 1     DESTLEN,
166 0460 1     SRC,
167 0461 1     SCALE
168 0462 1 ) : NOVALUE =
169 0463 1
170 0464 1 ++
171 0465 1 FUNCTIONAL DESCRIPTION:
172 0466 1     Converts a single floating number to packed.
173 0467 1
174 0468 1 CALLING SEQUENCE:
175 0469 1     BASSCVTFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)
176 0470 1
177 0471 1 FORMAL PARAMETERS:
178 0472 1
179 0473 1     DEST.wp.r      place to store the converted number
180 0474 1     DESTLEN.rl.v   number of digits in the destination
181 0475 1     SRC.rf.r       number to be converted
182 0476 1     SCALE.rl.v    power of ten by which the internal
183 0477 1                  representation of the sourc must be
184 0478 1                  multiplied to scale the same as the
185 0479 1                  internal representation of the dest.
186 0480 1
187 0481 1
188 0482 1 IMPLICIT INPUTS:
189 0483 1
190 0484 1     NONE
191 0485 1
192 0486 1 IMPLICIT OUTPUTS:
193 0487 1
194 0488 1     NONE
195 0489 1
196 0490 1 COMPLETION STATUS:
197 0491 1
198 0492 1     NONE
199 0493 1
200 0494 1 SIDE EFFECTS:
201 0495 1
202 0496 1     May signal decimal overflow if an error occurs in the OTS
203 0497 1     conversion routine
204 0498 1
205 0499 1 --
206 0500 1
207 0501 1
208 0502 2 BEGIN
209 0503 2
210 0504 2 LOCAL
211 0505 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
212 0506 2     STATUS;
213 0507 2
214 0508 2 STATUS = OTSSCVTFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
215 0509 2 IF (NOT .STATUS)
216 0510 2 THEN
217 0511 2     BEGIN
218 0512 2
```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTFP - Convert float to packed

F 8
16-Sep-1984 00:16:29 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASSCVTRP.B32;1

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(3)

```

: 219      0513      3      FIND_FRAME (FMP);
: 220      0514      3      IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
: 221      0515      3      THEN
: 222      0516      3      BASS$SIGNAL (BASS$K_DECERR);
: 223      0517      3
: 224      0518      3      END;
: 225      0519      1      END;

```

! routine BASSCVTFP

.TITLE BASSCVTRP BASSCVTRP - Convert real to packed
.IDENT \1-004\

.EXTRN BASS\$HANDLER, OT\$SCVTFP, R9
.EXTRN OT\$SCVTDP, R9, OT\$SCVTGP, R9
.EXTRN OT\$SCVTHP, R9, OT\$SCVTRFP, R9
.EXTRN OT\$SCVTRDP, R9, OT\$SCVTRGP, R9
.EXTRN OT\$SCVTRHP, R9, OT\$SCVTRPF, R9
.EXTRN OT\$SCVTPD, R9, OT\$SCVTPG, R9
.EXTRN OT\$SCVTPH, R9, BASS\$SIGNAL
.EXTRN BASS\$K_DECERR

.PSECT _BASS\$CODE, NOWRT, SHR, PIC, 2

.ENTRY BASSCVTFP, Save R2, R3, R4, R5, R6, R7, R8, R9, -
R10, R11

```

MOVL DEST, R9
MOVL DESTLEN, R8
MOVL SRC, R7
MOVL SCALE, R6
JSB OT$SCVTFP, R9
BLBS STATUS, 3$
MOVL FP, FMP
MOVL 12(FMP), FMP
MOVAB BASS$HANDLER, R1
CML (FMP), R1
BEQL 2$
TSTL FMP
BNEQ 1$
TSTL FMP
BEQL 3$
BBC #10, -26(FMP), 3$
MOVZBL #BASS$K_DECERR, -(SP)
CALLS #1, BASS$SIGNAL
RET

```

OFFC 00000

```

59      04      AC      D0      00002
58      08      AC      D0      00006
57      0C      AC      D0      0000A
56      10      AC      D0      0000E
      00000000G      00      16      00012
2B      50      E8      00018
50      5D      D0      0001B
50      0C      A0      D0      0001E 1$:
51      00000000G      00      9E      00022
51      60      D1      00029
      04      13      0002C
      50      D5      0002E
      EC      12      00030
      50      D5      00032 2$:
      10      13      00034
      0B      E6      A0      0A      E1      00036
      7E      00G      8F      9A      0003B
      00000000G      00      01      FB      0003F
      04      00046 3$:

```

; Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 0000

```
227 0520 1 %SBTTL 'BASSCVTDP - Convert double to packed'
228 0521 1 GLOBAL ROUTINE BASSCVTDP (
229 0522 1     DEST,
230 0523 1     DESTLEN,
231 0524 1     SRC,
232 0525 1     SCALE
233 0526 1 ) : NOVALUE =
234 0527 1
235 0528 1 ++
236 0529 1 FUNCTIONAL DESCRIPTION:
237 0530 1
238 0531 1     Converts a double floating number to packed.
239 0532 1
240 0533 1 CALLING SEQUENCE:
241 0534 1
242 0535 1     BASSCVTDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)
243 0536 1
244 0537 1 FORMAL PARAMETERS:
245 0538 1
246 0539 1     DEST.wp.r     place to store the converted number
247 0540 1     DESTLEN.rl.v number of digits in the destination
248 0541 1     SRC.rd.r     number to be converted
249 0542 1     SCALE.rl.v  power of ten by which the internal
250 0543 1                 representation of the sourc must be
251 0544 1                 multiplied to scale the same as the
252 0545 1                 internal representation of the dest.
253 0546 1
254 0547 1 IMPLICIT INPUTS:
255 0548 1
256 0549 1     NONE
257 0550 1
258 0551 1 IMPLICIT OUTPUTS:
259 0552 1
260 0553 1     NONE
261 0554 1
262 0555 1 COMPLETION STATUS:
263 0556 1
264 0557 1     NONE
265 0558 1
266 0559 1 SIDE EFFECTS:
267 0560 1
268 0561 1     May signal decimal overflow if overflow occurs in the OTS
269 0562 1     conversion routine
270 0563 1
271 0564 1 --
272 0565 1
273 0566 2 BEGIN
274 0567 2
275 0568 2 LOCAL
276 0569 2     FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
277 0570 2     STATUS;
278 0571 2
279 0572 2 STATUS = OTS$CVTDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
280 0573 2 IF (NOT .STATUS)
281 0574 2 THEN
282 0575 2     BEGIN
283 0576 2
```


BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTDP - Convert double to packed

M 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASSCVTRP.B32;1

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```

: 284      0577 3      FIND FRAME (FMP);
: 285      0578 3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 286      0579 3      THEN
: 287      0580 3      BASS$SIGNAL (BAS$K_DECERR);
: 288      0581 3
: 289      0582 3      END;
: 290      0583 3
: 291      0584 1      END;

```

! End of routine BASSCVTDP

```

                                OFFC 00000
                                : 0521
                                : 0572
59      04 AC D0 00002
58      08 AC D0 00006
57      0C AC D0 0000A
56      10 AC D0 0000E
      00000000G 00 16 00012
28      50 E8 00018
50      5D D0 0001B
50      0C A0 D0 0001E 1$:
51      00000000G 00 9E 00022
51      60 D1 00029
      04 13 0002C
      50 D5 0002E
      EC 12 00030
      50 D5 00032 2$:
      10 13 00034
      0A E1 00036
      00G 8F 9A 0003B
      01 FB 0003F
      04 00046 3$:
                                : 0573
                                : 0577
                                : 0578
                                : 0580
                                : 0584
.ENTRY BASSCVTDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-
      R10,R11
      DEST, R9
      DESTLEN, R8
      SRC, R7
      SCALE, R6
      JSB OTSSCVTDP, R9
      BLBS STATUS, 3$
      MOVL FP, FMP
      MOVL 12(FMP), FMP
      MOVAB BASS$HANDLER, R1
      CMPL (FMP), R1
      BEQL 2$
      TSTL FMP
      BNEQ 1$
      TSTL FMP
      BEQL 3$
      BBC #10, -26(FMP), 3$
      MOVZBL #BAS$K_DECERR, -(SP)
      CALLS #1, BASS$SIGNAL
      RET

```

; Routine Size: 71 bytes, Routine Base: _BAS\$CODE + 0047

```
293 0585 1 XSBTTL 'BASSCVTGP - Convert gfloat to packed'
294 0586 1 GLOBAL ROUTINE BASSCVTGP (
295 0587 1     DEST,
296 0588 1     DESTLEN,
297 0589 1     SRC,
298 0590 1     SCALE
299 0591 1 ) : NOVALUE =
300 0592 1
301 0593 1
302 0594 1 ++
303 0595 1 FUNCTIONAL DESCRIPTION:
304 0596 1     Converts a g floating number to packed.
305 0597 1
306 0598 1 CALLING SEQUENCE:
307 0599 1
308 0600 1     BASSCVTGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
309 0601 1
310 0602 1 FORMAL PARAMETERS:
311 0603 1
312 0604 1     DEST.wp.r      place to store the converted number
313 0605 1     DESTLEN.rl.v   number of digits in the destination
314 0606 1     SRC.rg.r       number to be converted
315 0607 1     SCALE.rl.v    power of ten by which the internal
316 0608 1                   representation of the sourc must be
317 0609 1                   multiplied to scale the same as the
318 0610 1                   internal representation of the dest.
319 0611 1
320 0612 1 IMPLICIT INPUTS:
321 0613 1
322 0614 1     NONE
323 0615 1
324 0616 1 IMPLICIT OUTPUTS:
325 0617 1
326 0618 1     NONE
327 0619 1
328 0620 1 COMPLETION STATUS:
329 0621 1
330 0622 1     NONE
331 0623 1
332 0624 1 SIDE EFFECTS:
333 0625 1
334 0626 1     May signal decimal overflow if that error occurs in the OTS
335 0627 1     conversion routine
336 0628 1
337 0629 1 --
338 0630 1
339 0631 1 BEGIN
340 0632 1
341 0633 1 LOCAL
342 0634 1     FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
343 0635 1     STATUS;
344 0636 1
345 0637 1     STATUS = OTS$CVTGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
346 0638 1     IF (NOT .STATUS)
347 0639 1     THEN
348 0640 1         BEGIN
349 0641 1
```

BAS\$CVTRP
1-004

BAS\$CVTRP - Convert real to packed
BAS\$CVTGP - Convert gfloat to packed

J 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 B11ss-32 V4.0-742
[BASRTL.SRC]BAS\$CVTRP.B32:1

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```

: 350      0642      FIND_FRAME (FMP);
: 351      0643      IF (.FMP NEQ 0) AND (.FMP [BSFSM_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 352      0644      THEN
: 353      0645      BAS$$SIGNAL (BAS$K_DECERR);
: 354      0646
: 355      0647      END;
: 356      0648      END;

```

! End of routine BAS\$CVTGP

			OFFC 00000				
59	04	AC	D0	00002	.ENTRY	BAS\$CVTGP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	0586
58	08	AC	D0	00006	MOVL	R10,R11	
57	0C	AC	D0	0000A	MOVL	DEST, R9	0637
56	10	AC	D0	0000E	MOVL	DESTLEN, R8	
2B	00000000G	00	16	00012	MOVL	SRC, R7	
50		50	E8	00018	MOVL	SCALE, R6	
50		50	D0	0001B	JSB	OT\$CVTGP, R9	
50	0C	A0	D0	0001E 1\$:	BLBS	STATUS, 3\$	0638
51	00000000G	00	9E	00022	MOVL	FP, FMP	0642
51		60	D1	00029	MOVL	12(FMP), FMP	
		04	13	0002C	MOVAB	BAS\$HANDLER, R1	
		50	D5	0002E	CMPL	(FMP), R1	
		EC	12	00030	BEQL	2\$	
		50	D5	00032 2\$:	TSTL	FMP	
		10	13	00034	BNEQ	1\$	0643
0B	E6	A0	0A	E1 00036	TSTL	FMP	
		7E	8F	9A 0003B	BEQL	3\$	
00000000G	00	00G	01	FB 0003F	BBC	#10, -26(FMP), 3\$	
			04	00046 3\$:	MOVZBL	#BAS\$K_DECERR, -(SP)	0645
					CALLS	#1, BAS\$\$SIGNAL	
					RET		0648

: Routine Size: 71 bytes. Routine Base: _BAS\$CODE + 008E


```
358 0649 1 $SBTTL 'BAS$CVTHP - Convert hfloat to packed'
359 0650 1 GLOBAL ROUTINE BAS$CVTHP (
360 0651 1     DEST,
361 0652 1     DESTLEN,
362 0653 1     SRC,
363 0654 1     SCALE
364 0655 1 ) : NOVALUE =
365 0656
366 0657 1
367 0658 1 ++
368 0659 1 FUNCTIONAL DESCRIPTION:
369 0660 1     Converts a h floating number to packed.
370 0661 1
371 0662 1 CALLING SEQUENCE:
372 0663 1
373 0664 1     BAS$CVTHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
374 0665 1
375 0666 1 FORMAL PARAMETERS:
376 0667 1
377 0668 1     DEST.wp.r     place to store the converted number
378 0669 1     DESTLEN.rl.v  number of digits in the destination
379 0670 1     SRC.rh.r     number to be converted
380 0671 1     SCALE.rl.v   power of ten by which the internal
381 0672 1                 representation of the sourc must be
382 0673 1                 multiplied to scale the same as the
383 0674 1                 internal representation of the dest.
384 0675 1
385 0676 1 IMPLICIT INPUTS:
386 0677 1
387 0678 1     NONE
388 0679 1
389 0680 1 IMPLICIT OUTPUTS:
390 0681 1
391 0682 1     NONE
392 0683 1
393 0684 1 COMPLETION STATUS:
394 0685 1
395 0686 1     May signal decimal overflow if that error occurs in the OTS
396 0687 1     conversion routine
397 0688 1
398 0689 1 SIDE EFFECTS:
399 0690 1
400 0691 1     NONE
401 0692 1
402 0693 1 --
403 0694 1
404 0695 2 BEGIN
405 0696 2
406 0697 2 LOCAL
407 0698 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
408 0699 2     STATUS;
409 0700 2
410 0701 2     STATUS = OTS$CVTHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
411 0702 2     IF (NOT .STATUS)
412 0703 2     THEN
413 0704 2         BEGIN
414 0705 2
```

BAS\$CVTRP
1-004

BAS\$CVTRP - Convert real to packed
BAS\$CVTHP - Convert hfloat to packed

L 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BAS\$CVTRP.B32;1

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```

: 415      0706      3      FIND FRAME (FMP);
: 416      0707      3      IF (.FMP NEQ 0) AND (.FMP [BSF$W_FCD_FLAGS] AND BSF$M_FCD_DV) NEQ 0
: 417      0708      3      THEN
: 418      0709      3      BAS$$SIGNAL (BAS$K_DECERR);
: 419      0710      3
: 420      0711      2      END;
: 421      0712      1      END;

```

! End of routine BAS\$CVTHP

```

                                OFFC 00000
                                .ENTRY BAS$CVTHP, Save R2,R3,R4,R5,R6,R7,R8,R9,-
                                R10,R11
59      04 AC D0 00002      MOVL DEST, R9
58      08 AC D0 00006      MOVL DESTLEN, R8
57      0C AC D0 0000A      MOVL SRC, R7
56      10 AC D0 0000E      MOVL SCALE, R6
      00000000G 00 16 00012      JSB OT$CVTHP R9
2B      50 5D E8 00018      BLBS STATUS, 3$
50      5D D0 0001B      MOVL FP, FMP
50      0C A0 D0 0001E 1$: MOVL 12(FMP), FMP
51 00000000G 00 9E 00022      MOVAB BAS$HANDLER, R1
51      60 D1 00029      CML (FMP), R1
      04 13 0002C      BEQL 2$
      50 D5 0002E      TSTL FMP
      EC 12 00030      BNEQ 1$
      50 D5 00032 2$: TSTL FMP
      10 13 00034      BEQL 3$
      0A E1 00036      BBC #10, -26(FMP), 3$
      00G 8F 9A 0003B      MOVZBL #BAS$K_DECERR, -(SP)
      01 FB 0003F      CALLS #1, BAS$$SIGNAL
      04 00046 3$: RET

```

; Routine Size: 71 bytes, Routine Base: _BAS\$CODE + 00D5

BAS\$CVTRP
1-004

BAS\$CVTRP - Convert real to packed
BAS\$CVTRFP - Convert float to packed (rounded)

M 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BAS\$CVTRP.B32;1

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```

423 0713 1 %SBTTL 'BAS$CVTRFP - Convert float to packed (rounded)'
424 0714 1 GLOBAL ROUTINE BAS$CVTRFP (
425 0715 1     DEST,
426 0716 1     DESTLEN,
427 0717 1     SRC,
428 0718 1     SCALE
429 0719 1 ) : NOVALUE =
430 0720 1
431 0721 1 ++
432 0722 1 FUNCTIONAL DESCRIPTION:
433 0723 1
434 0724 1     Converts a single floating number to packed using rounding.
435 0725 1
436 0726 1 CALLING SEQUENCE:
437 0727 1
438 0728 1     BAS$CVTRFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)
439 0729 1
440 0730 1 FORMAL PARAMETERS:
441 0731 1
442 0732 1     DEST.wp.r      place to store the converted number
443 0733 1     DESTLEN.rl.v   number of digits in the destination
444 0734 1     SRC.rf.r      number to be converted
445 0735 1     SCALE.rl.v    power of ten by which the internal
446 0736 1                  representation of the sourc must be
447 0737 1                  multiplied to scale the same as the
448 0738 1                  internal representation of the dest.
449 0739 1
450 0740 1 IMPLICIT INPUTS:
451 0741 1
452 0742 1     NONE
453 0743 1
454 0744 1 IMPLICIT OUTPUTS:
455 0745 1
456 0746 1     NONE
457 0747 1
458 0748 1 COMPLETION STATUS:
459 0749 1
460 0750 1     NONE
461 0751 1
462 0752 1 SIDE EFFECTS:
463 0753 1
464 0754 1     May signal decimal overflow if an error occurs in the OTS
465 0755 1     conversion routine
466 0756 1
467 0757 1 --
468 0758 1
469 0759 2 BEGIN
470 0760 2
471 0761 2 LOCAL
472 0762 2     FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
473 0763 2     STATUS;
474 0764 2
475 0765 2     STATUS = OTS$CVTRFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
476 0766 2     IF (NOT .STATUS)
477 0767 2     THEN
478 0768 2         BEGIN
479 0769 2
```


BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRFP - Convert float to packed (rounded)

N 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

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```
: 480      0770      3      FIND_FRAME (FMP);      ! Find BASIC frame
: 481      0771      3      IF (FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 482      0772      3      THEN      ! If "/OVERFLOW = NODEC" not set
: 483      0773      3      BASS$SIGNAL (BASS$K_DECERR);
: 484      0774      3
: 485      0775      3      END;
: 486      0776      1      END;      ! routine BASSCVTRFP
```

				OFFC 00000	.ENTRY	BASSCVTRFP, Save R2,R3,R4,R5,R6,R7,R8,R9,-		
						R10,R11	:	0714
					MOVL	DEST, R9	:	0765
					MOVL	DESTLEN, R8	:	
					MOVL	SRC, R7	:	
					MOVL	SCALE, R6	:	
					JSB	OTSSCVTRFP_R9	:	
					BLBS	STATUS, 3\$:	0766
					MOVL	FP, FMP	:	0770
					MOVL	12(FMP), FMP	:	
					MOVAB	BASS\$HANDLER, R1	:	
					CMPL	(FMP), R1	:	
					BEQL	2\$:	
					TSTL	FMP	:	
					BNEQ	1\$:	
					TSTL	FMP	:	0771
					BEQL	3\$:	
					BBC	#10, -26(FMP), 3\$:	
					MOVZBL	#BASS\$K_DECERR, -(SP)	:	0773
					CALLS	#1, BASS\$SIGNAL	:	
					RET		:	0776

; Routine Size: 71 bytes. Routine Base: _BASS\$CODE + 011C

```
488 0777 1 XSBTTL 'BASSCVTRDP - Convert double to packed (rounded)'  
489 0778 1 GLOBAL ROUTINE BASSCVTRDP (  
490 0779 1     DEST,          Convert double to packed (rounded)  
491 0780 1     DESTLEN,    place to store conv. number  
492 0781 1     SRC,        number of digits in dest  
493 0782 1     SCALE,      number to be converted  
494 0783 1     ) : NOVALUE = power of ten to mult src  
495 0784 1  
496 0785 1  
497 0786 1 ++  
498 0787 1 FUNCTIONAL DESCRIPTION:  
499 0788 1     Converts a double floating number to packed using rounding.  
500 0789 1  
501 0790 1 CALLING SEQUENCE:  
502 0791 1  
503 0792 1     BASSCVTRDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)  
504 0793 1  
505 0794 1 FORMAL PARAMETERS:  
506 0795 1  
507 0796 1     DEST.wp.r      place to store the converted number  
508 0797 1     DESTLEN.rl.v  number of digits in the destination  
509 0798 1     SRC.rd.r     number to be converted  
510 0799 1     SCALE.rl.v  power of ten by which the internal  
511 0800 1                  representation of the source must be  
512 0801 1                  multiplied to scale the same as the  
513 0802 1                  internal representation of the dest.  
514 0803 1  
515 0804 1 IMPLICIT INPUTS:  
516 0805 1  
517 0806 1     NONE  
518 0807 1  
519 0808 1 IMPLICIT OUTPUTS:  
520 0809 1  
521 0810 1     NONE  
522 0811 1  
523 0812 1 COMPLETION STATUS:  
524 0813 1  
525 0814 1     NONE  
526 0815 1  
527 0816 1 SIDE EFFECTS:  
528 0817 1  
529 0818 1     May signal decimal overflow if overflow occurs in the OTS  
530 0819 1     conversion routine  
531 0820 1  
532 0821 1 --  
533 0822 1  
534 0823 2 BEGIN  
535 0824 2  
536 0825 2 LOCAL  
537 0826 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame  
538 0827 2     STATUS;  
539 0828 2  
540 0829 2     STATUS = OTSCVTRDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);  
541 0830 3 IF (NOT .STATUS)  
542 0831 2 THEN  
543 0832 3 BEGIN  
544 0833 3
```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRDP - Convert double to packed (rounded)

C 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVRTP.B32;1

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```
: 545      0834 3      FIND FRAME (FMP);      ! Find BASIC frame
: 546      0835      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSW_FCD_DV) NEQ 0
: 547      0836      THEN      ! If "/OVERFLOW = NODEC" not set
: 548      0837      BASS$SIGNAL (BAS$K_DECERR);
: 549      0838
: 550      0839      END;
: 551      0840 1      END;      ! End of routine BASSCVTRDP
```

			OFFC 00000		.ENTRY BASSCVTRDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	
					R10,R11	: 0778
59	04	AC	D0 00002		MOVL DEST, R9	: 0829
58	08	AC	D0 00006		MOVL DESTLEN, R8	
57	0C	AC	D0 0000A		MOVL SRC, R7	
56	10	AC	D0 0000E		MOVL SCALE, R6	
	00000000G	00	16 00012		JSB OT\$CVTRDP_R9	
2B		50	E8 00018		BLBS STATUS, 3\$: 0830
50		5D	D0 0001B		MOVL FP, FMP	: 0834
50	0C	A0	D0 0001E 1\$:		MOVL 12(FMP), FMP	
51	00000000G	00	9E 00022		MOVAB BASS\$HANDLER, R1	
51		60	D1 00029		CMPL (FMP), R1	
		04	13 0002C		BEQL 2\$	
		50	D5 0002E		TSTL FMP	
		EC	12 00030		BNEQ 1\$	
		50	D5 00032 2\$:		TSTL FMP	: 0835
		10	13 00034		BEQL 3\$	
0B	E6	A0	0A E1 00036		BB(#10, -26(FMP), 3\$	
		7E	8F 9A 0003B		MOVZBL #BAS\$K_DECERR, -(SP)	: 0837
	00000000G	00	01 FB 0003F		CALLS #1, BASS\$SIGNAL	: 0840
			04 00046 3\$:		RET	

; Routine Size: 71 bytes, Routine Base: _BAS\$CODE + 0163


```
553 0841 1 XSBTTL 'BASSCVTRGP - Convert gfloat to packed (rounded)'
554 0842 1 GLOBAL ROUTINE BASSCVTRGP (
555 0843 1     DEST,
556 0844 1     DESTLEN,
557 0845 1     SRC,
558 0846 1     SCALE
559 0847 1 ) : NOVALUE =
560 0848 1
561 0849 1 **
562 0850 1 FUNCTIONAL DESCRIPTION:
563 0851 1
564 0852 1     Converts a g floating number to packed using rounding.
565 0853 1
566 0854 1 CALLING SEQUENCE:
567 0855 1
568 0856 1     BASSCVTRGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
569 0857 1
570 0858 1 FORMAL PARAMETERS:
571 0859 1
572 0860 1     DEST.wp.r      place to store the converted number
573 0861 1     DESTLEN.rl.v   number of digits in the destination
574 0862 1     SRC.rg.r      number to be converted
575 0863 1     SCALE.rl.v    power of ten by which the internal
576 0864 1                  representation of the source must be
577 0865 1                  multiplied to scale the same as the
578 0866 1                  internal representation of the dest.
579 0867 1
580 0868 1 IMPLICIT INPUTS:
581 0869 1
582 0870 1     NONE
583 0871 1
584 0872 1 IMPLICIT OUTPUTS:
585 0873 1
586 0874 1     NONE
587 0875 1
588 0876 1 COMPLETION STATUS:
589 0877 1
590 0878 1     NONE
591 0879 1
592 0880 1 SIDE EFFECTS:
593 0881 1
594 0882 1     May signal decimal overflow if that error occurs in the OTS
595 0883 1     conversion routine
596 0884 1
597 0885 1 --
598 0886 1
599 0887 2 BEGIN
600 0888 2
601 0889 2 LOCAL
602 0890 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF&FCD),      ! Ptr to BASIC frame
603 0891 2     STATUS;
604 0892 2
605 0893 2     STATUS = OTSCVTRGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
606 0894 2     IF (NOT .STATUS)
607 0895 2     THEN
608 0896 2         BEGIN
609 0897 2
```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRGP - Convert gfloat to packed (rounded)

E 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASSCVTRP.B32;1

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```

: 610      0898      3      FIND_FRAME (FMP);      ! Find BASIC frame
: 611      0899      3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSW_FCD_DV) NEQ 0
: 612      0900      3      THEN
: 613      0901      3      BASS$SIGNAL (BASS$K_DECERR);      ! If "/OVERFLOW = NODEC" not set
: 614      0902      3
: 615      0903      3      END;
: 616      0904      3      END;      ! End of routine BASS$CVTRGP
```

			OFFC 00000				
					.ENTRY	BASS\$CVTRGP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	0842
						R10,R11	
					MOVL	DEST, R9	0893
					MOVL	DESTLEN, R8	
					MOVL	SRC, R7	
					MOVL	SCALE, R6	
					JSB	OT\$SCVTRGP_R9	
					BLBS	STATUS, 3\$	0894
					MOVL	FP, FMP	0898
					MOVL	12(FMP), FMP	
					MOVAB	BASS\$HANDLER, R1	
					CMPL	(FMP), R1	
					BEQL	2\$	
					TSTL	FMP	
					BNEQ	1\$	
					TSTL	FMP	0899
					BEQL	3\$	
					BBC	#10, -26(FMP), 3\$	
					MOVZBL	#BASS\$K_DECERR, -(SP)	0901
					CALLS	#1, BASS\$SIGNAL	
					RET		0904

; Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 01AA

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRHP - Convert hfloat to packed (rounded)

F 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVRTP.B32:1

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```

618 0905 1 %SBTTL 'BASSCVTRHP - Convert hfloat to packed (rounded)'
619 0906 1 GLOBAL ROUTINE BASSCVTRHP (
620 0907 1     DEST,
621 0908 1     DESTLEN,
622 0909 1     SRC,
623 0910 1     SCALE
624 0911 1 ) : NOVALUE =
625 0912 1
626 0913 1
627 0914 1 **
628 0915 1 FUNCTIONAL DESCRIPTION:
629 0916 1     Converts a h floating number to packed using rounding.
630 0917 1
631 0918 1 CALLING SEQUENCE:
632 0919 1
633 0920 1     BASSCVTRHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
634 0921 1
635 0922 1 FORMAL PARAMETERS:
636 0923 1
637 0924 1     DEST.wp.r      place to store the converted number
638 0925 1     DESTLEN.rl.v   number of digits in the destination
639 0926 1     SRC.rh.r       number to be converted
640 0927 1     SCALE.rl.v   power of ten by which the internal
641 0928 1                  representation of the sourc must be
642 0929 1                  multiplied to scale the same as the
643 0930 1                  internal representation of the dest.
644 0931 1
645 0932 1 IMPLICIT INPUTS:
646 0933 1
647 0934 1     NONE
648 0935 1
649 0936 1 IMPLICIT OUTPUTS:
650 0937 1
651 0938 1     NONE
652 0939 1
653 0940 1 COMPLETION STATUS:
654 0941 1
655 0942 1     May signal decimal overflow if that error occurs in the OTS
656 0943 1     conversion routine
657 0944 1
658 0945 1 SIDE EFFECTS:
659 0946 1
660 0947 1     NONE
661 0948 1
662 0949 1 --
663 0950 1
664 0951 2 BEGIN
665 0952 2
666 0953 2 LOCAL
667 0954 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
668 0955 2     STATUS;
669 0956 2
670 0957 2 STATUS = OTS$CVTRHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
671 0958 2 IF (NOT .STATUS)
672 0959 2 THEN
673 0960 2     BEGIN
674 0961 2
```


BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRHP - Convert hfloat to packed (rounded)

G 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASSCVTRP.B32:1

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```

: 675      0962      3      FIND FRAME (FMP);      ! Find BASIC frame
: 676      0963      3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 677      0964      3      THEN      ! If "/OVERFLOW = NODEC" not set
: 678      0965      3      BASS$SIGNAL (BASS$K_DECERR);
: 679      0966      3
: 680      0967      2      END;
: 681      0968      1      END;

```

! End of routine BASSCVTRHP

```

                                OFFC 00000
                                .ENTRY BASSCVTRHP, Save R2,R3,R4,R5,R6,R7,R8,R9,-
                                R10,R11
59      04      AC      D0 00002      MOVL      DEST, R9
58      08      AC      D0 00006      MOVL      DESTLEN, R8
57      0C      AC      D0 0000A      MOVL      SRC, R7
56      10      AC      D0 0000E      MOVL      SCALE, R6
      00000000G      00 16 00012      JSB      OTSSCVTRHP_R9
28      50      50      E8 00018      BLBS      STATUS, 3$
50      50      50      D0 0001B      MOVL      FP, FMP
50      0C      A0      D0 0001E 1$:      MOVL      12(FMP), FMP
51      00000000G      00 9E 00022      MOVAB     BASSHANDLER, R1
51      60      D1 00029      CMPL      (FMP), R1
      04 13 0002C      BEQL      2$
      50 D5 0002E      TSTL      FMP
      EC 12 00030      BNEQ      1$
      50 D5 00032 2$:      TSTL      FMP
      10 13 00034      BEQL      3$
      0A E1 00036      BBC      #10, -26(FMP), 3$
      00G 8F 9A 0003B      MOVZBL     #BASS$K_DECERR, -(SP)
      01 FB 0003F      CALLS      #1, BASS$SIGNAL
      04 00046 3$:      RET

```

; Routine Size: 71 bytes, Routine Base: _BASSCODE + 01F1

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTPF - Convert packed to float

H 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASSCVTRP.B32:1

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```

683 0969 1 XSBTTL 'BASSCVTPF - Convert packed to float'
684 0970 1 GLOBAL ROUTINE BASSCVTPF (
685 0971 1     DEST,
686 0972 1     SRC,
687 0973 1     SRCLEN,
688 0974 1     SCALE
689 0975 1 ) : NOVALUE =
690 0976 1
691 0977 1 ++
692 0978 1 FUNCTIONAL DESCRIPTION:
693 0979 1     Converts a packed number to single floating.
694 0980 1
695 0981 1 CALLING SEQUENCE:
696 0982 1
697 0983 1     BASSCVTPF (DEST.wf.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
698 0984 1
699 0985 1 FORMAL PARAMETERS:
700 0986 1
701 0987 1     DEST.wf.r     place to store the converted number
702 0988 1     SRC.rf.r     number to be converted
703 0989 1     SRCLEN.rl.v  number of digits in the source
704 0990 1     SCALE.rl.v  power of ten by which the internal
705 0991 1                 representation of the source must be
706 0992 1                 multiplied to scale the same as the
707 0993 1                 internal representation of the dest.
708 0994 1
709 0995 1 IMPLICIT INPUTS:
710 0996 1
711 0997 1     NONE
712 0998 1
713 0999 1 IMPLICIT OUTPUTS:
714 1000 1
715 1001 1     NONE
716 1002 1
717 1003 1 COMPLETION STATUS:
718 1004 1
719 1005 1     NONE
720 1006 1
721 1007 1 SIDE EFFECTS:
722 1008 1
723 1009 1     NONE
724 1010 1
725 1011 1 --
726 1012 1
727 1013 1
728 1014 2 BEGIN
729 1015 2
730 1016 2 OTS$CVTPF_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
731 1017 2
732 1018 1 END;
! End of routine BASSCVTPF
```

OFFC 00000

.ENTRY BASSCVTPF, Save R2,R3,R4,R5,R6,R7,R8,R9,-
R10,R11

: 0970
:

BASSCVTRP - Convert real to packed
BASSCVTPF - Convert packed to float

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VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

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59	04	AC	D0	00002
58	08	AC	D0	00006
57	0C	AC	D0	0000A
56	10	AC	D0	0000E
	00000000G	00	16	00012
			04	00018

```

MOVL    DEST, R9
MOVL    SRC, R8
MOVL    SRCLEN, R7
MOVL    SCALE, R6
JSB     OTSS$CVTPF_R9
RET

```

1016
1018

```
; Routine Size: 25 bytes,   Routine Base: _BASSCODE + 0238
```



```

734 1019 1 %SBTTL 'BASSCVTPD - Convert packed to double'
735 1020 1 GLOBAL ROUTINE BASSCVTPD (
736 1021 1     DEST,
737 1022 1     SRC,
738 1023 1     SRCLEN,
739 1024 1     SCALE
740 1025 1 ) : NOVALUE =
741 1026 1
742 1027 1
743 1028 1
744 1029 1
745 1030 1
746 1031 1
747 1032 1
748 1033 1
749 1034 1
750 1035 1
751 1036 1
752 1037 1
753 1038 1
754 1039 1
755 1040 1
756 1041 1
757 1042 1
758 1043 1
759 1044 1
760 1045 1
761 1046 1
762 1047 1
763 1048 1
764 1049 1
765 1050 1
766 1051 1
767 1052 1
768 1053 1
769 1054 1
770 1055 1
771 1056 1
772 1057 1
773 1058 1
774 1059 1
775 1060 1
776 1061 1
777 1062 1
778 1063 1
779 1064 2
780 1065 2
781 1066 2
782 1067 2
783 1068 1

    ++
    FUNCTIONAL DESCRIPTION:
        Converts a packed number to double floating.

    CALLING SEQUENCE:
        BASSCVTPD (DEST.wp.r, SRC.rf.r, SRCLEN.rl.v, SCALE.rl.v)

    FORMAL PARAMETERS:
        DEST.wd.r    place to store the converted number
        SRC.rp.r     number to be converted
        SRCLEN.rl.v  number of digits in source
        SCALE.rl.v   power of ten by which the internal
                    representation of the sourc must be
                    multiplied to scale the same as the
                    internal representation of the dest.

    IMPLICIT INPUTS:
        NONE

    IMPLICIT OUTPUTS:
        NONE

    COMPLETION STATUS:
        NONE

    SIDE EFFECTS:
        NONE

    --
    BEGIN
    OTSSCVTPD_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
    END;
! End of routine BASSCVTPD
```

OFFC 00000

.ENTRY BASSCVTPD, Save R2,R3,R4,R5,R6,R7,R8,R9,-
R10,R11: 1020
:

BASSCVTRP - Convert real to packed
BASSCVTPD - Convert packed to double

16-Sep-1984 00:16:28
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

Page 23
(12)

```

59      04 AC D0 00002
58      08 AC D0 00006
57      0C AC D0 0000A
56      10 AC D0 0000E
      00000000G 00 16 00012
                   04 00018

```

```

MOVL    DEST, R9
MOVL    SRC, R8
MOVL    SRCLEN, R7
MOVL    SCALE, R6
JSB     OTSSCVTPD_R9
RET

```

1066
1068

```

; Routine Size: 25 bytes,   Routine Base: _BASSCODE + 0251

```

BAS\$CVTRP
1-004

BAS\$CVTRP - Convert real to packed
BAS\$CVTPG - Convert packed to gfloat

L 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BAS\$CVTRP.B32;1

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(13)

```

785 1069 1 %SBTTL 'BAS$CVTPG - Convert packed to gfloat'
786 1070 1 GLOBAL ROUTINE BAS$CVTPG (
787 1071 1     DEST,
788 1072 1     SRC,
789 1073 1     SRCLEN,
790 1074 1     SCALE
791 1075 1 ) : NOVALUE =
792 1076 1
793 1077 1 ++
794 1078 1 FUNCTIONAL DESCRIPTION:
795 1079 1
796 1080 1     Converts a packed number to g floating.
797 1081 1
798 1082 1 CALLING SEQUENCE:
799 1083 1
800 1084 1     BAS$CVTPG (DEST.wg.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
801 1085 1
802 1086 1 FORMAL PARAMETERS:
803 1087 1
804 1088 1     DEST.wg.r     place to store the converted number
805 1089 1     SRC.rp.r     number to be converted
806 1090 1     SRCLEN.rl.v number of digits in the destination
807 1091 1     SCALE.rl.v  power of ten by which the internal
808 1092 1               representation of the source must be
809 1093 1               multiplied to scale the same as the
810 1094 1               internal representation of the dest.
811 1095 1
812 1096 1 IMPLICIT INPUTS:
813 1097 1
814 1098 1     NONE
815 1099 1
816 1100 1 IMPLICIT OUTPUTS:
817 1101 1
818 1102 1     NONE
819 1103 1
820 1104 1 COMPLETION STATUS:
821 1105 1
822 1106 1     NONE
823 1107 1
824 1108 1 SIDE EFFECTS:
825 1109 1
826 1110 1     NONE
827 1111 1
828 1112 1 --
829 1113 1
830 1114 2 BEGIN
831 1115 2
832 1116 2 OT$CVTPG_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
833 1117 2
834 1118 1 END;

```

! End of routine BAS\$CVTPG

OFFC 00000

.ENTRY BAS\$CVTPG, Save R2,R3,R4,R5,R6,R7,R8,R9,-
R10,R11

: 1070
:

59	04	AC	D0	00002
58	08	AC	D0	00006
57	0C	AC	D0	0000A
56	10	AC	D0	0000E
	00000000G	00	16	00012
			04	00018

```

MOVL    DEST, R9
MOVL    SRC, R8
MOVL    SRCLEN, R7
MOVL    SCALE, R6
JSB     OTSS$CVTPG_R9
RET

```

1116
1118

```
; Routine Size: 25 bytes,    Routine Base: _BASSCODE + 026A
```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTPH - Convert packed to hfloat

N 9
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASSCVTRP.B32;1

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(14)

```

836 1119 1 %SBTTL 'BASSCVTPH - Convert packed to hfloat'
837 1120 1 GLOBAL ROUTINE BASSCVTPH (
838 1121 1     DEST,
839 1122 1     SRC,
840 1123 1     SRCLEN,
841 1124 1     SCALE
842 1125 1     ) : NOVALUE =
843 1126 1
844 1127 1 ++
845 1128 1 FUNCTIONAL DESCRIPTION:
846 1129 1
847 1130 1     Converts a packed number to hfloating.
848 1131 1
849 1132 1 CALLING SEQUENCE:
850 1133 1
851 1134 1     BASSCVTPH (DEST.wh.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
852 1135 1
853 1136 1 FORMAL PARAMETERS:
854 1137 1
855 1138 1     DEST.wh.r     place to store the converted number
856 1139 1     SRC.rp.r      number to be converted
857 1140 1     SRCLEN.rl.v   number of digits in the source
858 1141 1     SCALE.rl.v    power of ten by which the internal
859 1142 1                  representation of the source must be
860 1143 1                  multiplied to scale the same as the
861 1144 1                  internal representation of the dest.
862 1145 1
863 1146 1 IMPLICIT INPUTS:
864 1147 1
865 1148 1     NONE
866 1149 1
867 1150 1 IMPLICIT OUTPUTS:
868 1151 1
869 1152 1     NONE
870 1153 1
871 1154 1 COMPLETION STATUS:
872 1155 1
873 1156 1     NONE
874 1157 1
875 1158 1 SIDE EFFECTS:
876 1159 1
877 1160 1     NONE
878 1161 1
879 1162 1 --
880 1163 1
881 1164 2 BEGIN
882 1165 2
883 1166 2 OTSSCVTPH_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
884 1167 2
885 1168 1 END;

```

! End of routine BASSCVTPH

OFFC 00000

.ENTRY BASSCVTPH, Save R2,R3,R4,R5,R6,R7,R8,R9,-
R10,R11

: 1120
:

BASS\$CVTRP - Convert real to packed
BASS\$CVTPH - Convert packed to hfloat

B 10
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

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(14)

```

59      04 AC D0 00002
58      08 AC D0 00006
57      0C AC D0 0000A
56      10 AC D0 0000E
      00000000G 00 16 00012
                   04 00018

```

```

MOVL    DEST, R9
MOVL    SRC, R8
MOVL    SRCLEN, R7
MOVL    SCALE, R6
JSB     OTSS$CVTPH_R9
RET

```

1166
1168

; Routine Size: 25 bytes, Routine Base: _BASSCODE + 0283

: 886 1169 1 !<BLF/PAGE>

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTPH - Convert packed to hfloat

C 10
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

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(15)

: 888
: 889
: 890
1170 1 END
1171 1
1172 0 ELUDOM

! End of module BASSCVTRP

PSECT SUMMARY

: Name Bytes Attributes
: _BASSCODE 668 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

Library Statistics

: File Total Symbols Loaded Percent Pages Mapped Processing Time
: _\$255\$DUA28:[SYSLIB]STARLET.L32;1 9776 0 0 581 00:01.1

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:BASCVTRP/OBJ=OBJ\$:BASCVTRP MSRC\$:BASCVTRP/UPDATE=(ENH\$:BASCVTRP)

: Size: 668 code + 0 data bytes
: Run Time: 00:15.1
: Elapsed Time: 00:32.6
: Lines/CPU Min: 4669
: Lexemes/CPU-Min: 14836
: Memory Used: 67 pages
: Compilation Complete

0021 AH-BT13A-SE
VAX/VMS V4.0

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